

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144 CLEZ
July 21, 2008

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

8192

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1. Operator: EverVest Operating, LLC OGRID #: 143199
Address: 1001 Fannin St. Ste 800 Houston, Texas 77002-6707
Facility or well name: Jicarilla C #002N
API Number: 30-039-29813 OCD Permit Number: 5940
U/L or Qtr/Qtr P Section 14 Township 26N Range 05W County: Rio Arriba
Center of Proposed Design: Latitude 36.28484 Longitude -107.19111 NAD: ☐ 1927 ☐ 1983
Surface Owner: ☐ Federal ☐ State ☐ Private ☒ Tribal Trust or Indian Allotment

2. ☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☒ Above Ground Steel Tanks or ☐ Haul-off Bins

3. **Signs:** Subsection C of 19.15.17.11 NMAC
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
☒ Signed in compliance with 19.15.3.103 NMAC

4. **Closed-loop Systems Permit Application Attachment Checklist:** Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____

5. **Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:** (19.15.17.13.D NMAC)
Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.
Disposal Facility Name: Envirotech Inc. Soil Remediation Facility Disposal Facility Permit Number: NM-01-0011
Disposal Facility Name: T -n- T Land Farm Disposal Facility Permit Number: NM-01-0008
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No
Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6. **Operator Application Certification:**
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): Janet M. Bienski Title: Regulatory Assistant
Signature: [Signature] Date: 4-7-11
e-mail address: jbienski@enervest.net Telephone: 713-495-1571

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7. **OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: Jonathan D. Kelly

Approval Date: 5/23/2011

Title: Compliance Officer

OCD Permit Number: _____

8.

Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ Closure Completion Date: _____

9.

Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

10.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

ENERVEST OPERATING, LLC

CLOSED-LOOP DESIGN PLAN

In accordance with 19.15.19.11 H (1) NMAC, Enervest Operating, LLC (EV) will design and construct its closed-loop system to insure the confinement of oil, gas, or water to prevent an uncontrolled release.

The design plan for the closed-loop system shall use appropriate engineering principles and practices and follow applicable manufactures' requirements. The plan shall include operating and maintenance procedures and a closure plan as described below.

We have attached a diagram of our proposed closed-loop system including a detailed explanation of the operation of the system. A well-sign shall be posted at the well site in accordance with 19.15.16.8 NMAC. We do not plan to install a fence around this closed-loop system as it will be used during the drilling of a new well.

EV shall use the "Sumplless Clearwater Drilling/Solids Control System" developed by Tecumseh Industries, Ltd. I have attached a brochure of the system for your review. The skid system consists of containment tanks, Tec Tanks, and centrifuge tanks. This uses super-vac vacuum trucks to haul off solids and non-required liquids instead of the customary haul-off bins.

CLOSED-LOOP OPERATING AND MAINTENANCE PLAN

In accordance with 19.15.17.A NMAC, EV shall operate and maintain the closed-loop system in a manner that will contain all solids and liquids, maintain the system's integrity, prevent contamination of fresh water and protect public health and the environment. This will be accomplished by the following processes:

- 1) EV shall recycle, reuse or reclaim, or dispose of all drilling fluids in a manner approved by the current NMOCD rules.
- 2) EV shall not discharge into or store any hazardous waste in the closed-loop system, including the containment tank, nor shall it allow miscellaneous solid waste or debris into the closed-loop system.
- 3) The Tec-Tanks will be of sufficient volume to maintain a safe freeboard prior to disposal of the solids and liquids from drilling rig operations. Disposal will be done on a periodic basis, whenever a containment tank is determined to be at full capacity, maintaining a safe and responsible freeboard. The solids and liquids in the closed-loop system will be transported off the drill site by NMOCD approved transportation and disposed of at a NMOCD-permitted disposal facility or facilities as identified in Section 5 of NMOCD Form C-144 CLEZ.

4) The closed-loop system will be inspected daily as long the drilling rig or workover rig are in operation. EV will maintain a log of such inspections.

5) In the event of a leak from any of the component systems within the closed-loop system, or if any penetration of a component occurs below the liquid's surface, then EV shall promptly remove all liquid above the damage or leak line, and notify the appropriate NMOCD district office within 48 hours of the discovery and repair the damage or replace the affected closed-loop component.

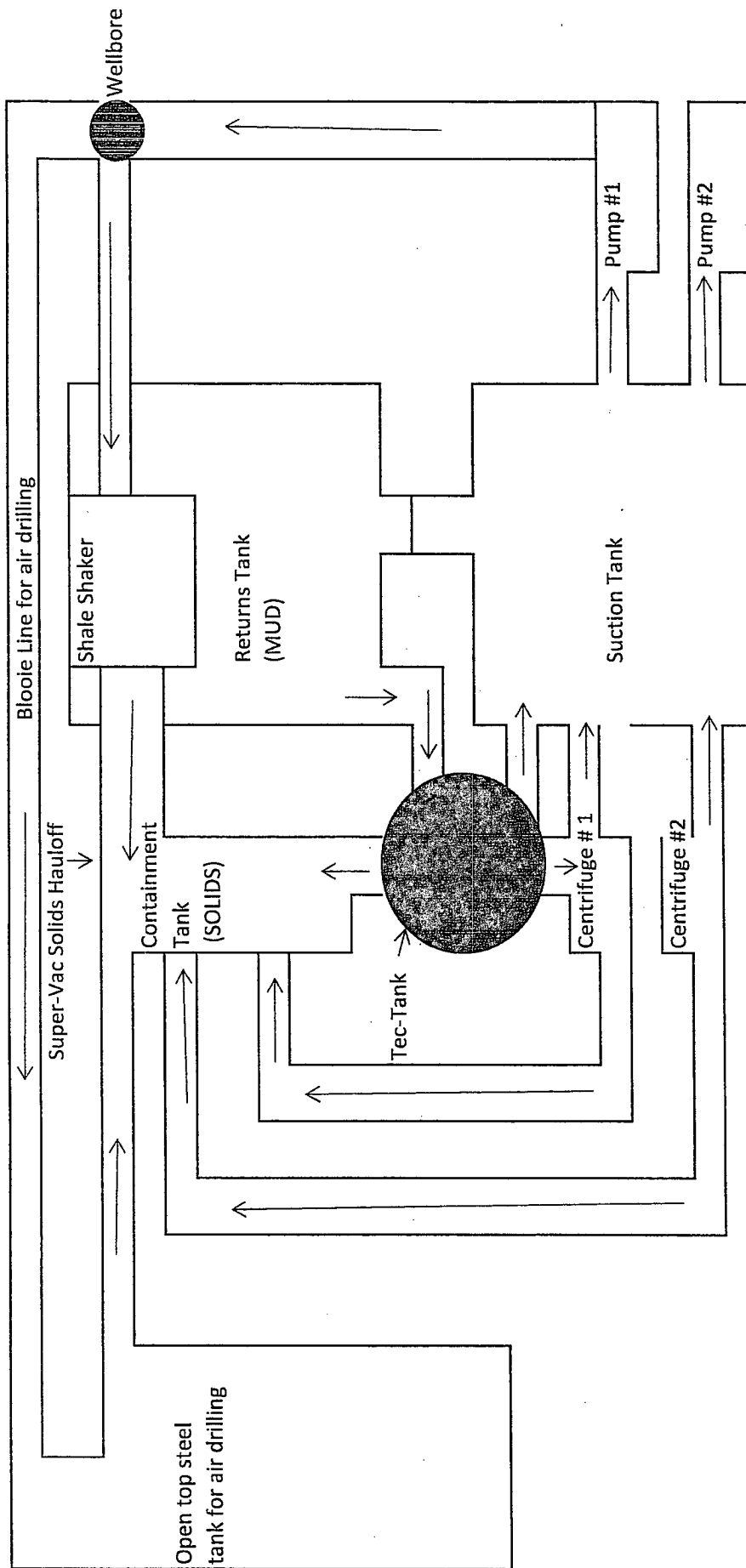
CLOSED-LOOP CLOSURE PLAN

In accordance with 19.15.17.13 NMAC, EV will not use any temporary pit or drying pads during any of our drilling or workover operations. The closed-loop system and all other associated activities will be performed on the drilling pad, and will not be performed on or in areas that will not be used for future service and operations of the wells location. The closure for the closed-loop system will be performed as follows:

1) Immediately following termination of rig operations, all solids and liquids remaining in the closed-loop skid will be disposed of in the approved facilities as outlined in Section 5 of NMOCD Form C-144 CLEZ.

2) The closed-loop system components, including any and all containment tanks, will be removed from the location in conjunction with the move of the drilling or completion rig from its current well site.

3) Within six months from the date that EV ceases drilling operations, EV shall complete and execute items 9 and 10 of the attached C-144 CLEZ and file the same with the appropriate NMOCD district office.



ENERVEST OPERATING, LLC

CLOSED-LOOP SYSTEM

Physical Operations

The mud system that is utilized is a combination of fresh water, gel, and polymer.

The solids bind to the polymer during the drilling circulation process through polymer sweeps and are sent over our drilling rig shaker as part of the first process of the closed loop system.

The shaker extracted solids vibrate off of the shaker screens into our Containment Tank that is specifically notched to accept the shaker and mud cuttings.

Two (2) Sharples P-3400 (high speed) centrifuges are also mounted on top of the Tec Tank that resides side by side to the rig's mud pit.

The active mud that is returned into the first shale compartment of the Tec Tank after being processed by the shale shaker where it is introduced to the Tec Tank to extract more solids. The active mud system then cascades over the shale compartment into the Tec Tank compartment where a 2" submersible Fisher pump pumps the active mud over to the centrifuges.

Typically only one centrifuge is utilized for most shallow wells and the other centrifuge is on standby if problems occur or it is energized if the mud weight cannot be maintained with only one centrifuge.

As the active mud passes through the high speed centrifuge the extracted solids drop out the bottom into the Containment Tank below and the cleaned mud is returned back to the rig Suction Tank system.

The active mud is also introduced to the Return Tank desilter unit as another means of extracting the solids and keeping the mud weight to an acceptable limit. The closed loop mud system is supplied with a service tech that maintains the equipment and monitors the system.

The closed loop mud system utilizes less fresh water than a typical drilling operation with a typical mud pit because the norm is to either dump your mud pits when the solids become too high and/or introduce more fresh water into the mud system to dilute the mud solids as much as possible.

The closed loop mud system treats the problem by reducing the solids and recycling the mud as opposed to simply diluting the solids problem. It is possible that the mud utilized on the first well can be recycled and utilized for the second well as a means of capturing additional mud and water savings.

Frac tanks are utilized to store and transfer the cleaned/recycled mud and also store fresh water if needed.

The excess cement was likewise hauled off using a vacuum truck with a gel coat lining on the inner tank and the cement was mixed with sugar to retard and it was hauled to a land farm as well.